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ABSTRACT

An assessment program was developed to measure the efficiency of educational programs used in the school districts throughout Pennsylvania. The effectiveness of the school was determined by measuring its product, collective student performance. This required a design which takes into account other conditions which appear to contribute to student performance. Implementing the model was carried out in three phases. Phase one included the development, field testing and refining of the instruments for each of the goals, the procedures for collecting data about students, school and community conditions, and computer analytic techniques for determining the relationship of school and community conditions which exist with student performance. Phase two concerned itself with the collection of information stratified from a state representative and phase three is the actual assessment of schools, which is a continuing activity begun in 1970. The assessment findings can be used to provide a focus for examing individual student test results which exist, to measure the effectiveness of curriculum changes and to provide objective data to support request for programs and equipment. (Author/BB)

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PENNSYLVANIA'S EDUCATIONAL QUALITY ASSESSMENT
THE FIRST STEP TO EDUCATIONAL CHANGE

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Pennsylvania's General Assembly in 1963 was preparing to enact legislation mandating school district reorganization. Legislative hearings on the bill included many arguments for and against requiring reorganization. The expression, "quality education," figured prominently in these arguments. When witnesses were asked to define the phrase, the number of different interpretations approached the number of individuals testifying. In consequence, Act 299 included the following mandate to the State Board of Education,

> "...to develop an evaluation procedure designed to measure objectively the adequacy and efficiency of the educational programs offered by the public schools of the Commonwealth"
> and
> "...to provide each school district with relevant comparative data to enable directors and administrators to more readily appraise the educational performance and to effectuate without delay the strengthening of the district's educational program."

Development of the evaluation procedure required both a philosophy and a foundation on which to build, a baseline for measurement. This foundation was established with the adoption of the Ten Goals of Quality Education by the State Board of Education in 1965.

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Ten Goals of Quality Education

I. Quality Education should help every child acquire the greatest possible understanding of himself or herself and appreciation of his or her worthiness as a member of society.

II. Quality education should help every child acquire understanding and appreciation of persons belonging to other social, cultural and ethnic groups.

III. Quality Education should help every child acquire, to the fullest possible extent, mastery of the basic skills in the use of words and numbers.

IV. Quality Education should help every child acquire a positive attitude toward the learning process.

V. Quality Education should help every child acquire the habits and attitudes associated with responsible citizenship.

VI. Quality Education should help every child acquire good health habits and an understanding of the conditions necessary for maintaining of physical and emotional well-being.

VII. Quality Education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

VIII. Quality Education should help every child understand the opportunities open to him or her to prepare for a productive life and help each child to take full advantage of these opportunities.

IX. Quality Education should help every child to understand and appreciate as much as possible of human achievement in the natural sciences, the social sciences and the humanities and the arts.

X. Quality Education should help every child to prepare for a world of rapid change and unforeseeable demands in which continuing education throughout adult life should be a normal expectation.

One of Pennsylvania's major contributions to the assessment concept was the shift of emphasis away from the measurement of student achievement in basic skills only, to the acceptance, and inclusion, of such vital aspects as self-concept, understanding others, interest in learning, citizenship, health habits, creativity, vocational cognizance, understanding human accomplishments and preparation for a changing world. Since the focus was the educational program offered by the school, the school became the unit of assessment but its effectiveness was determined by measuring the product, collective student performance.

Measuring total student performance, which can be realistically related to the adequacy of the educational program, requires a design which takes into account other conditions which appear to contribute to that performance. Information on forty-four selected factors, including what the student brings with him, the particular influence the surrounding community contributes, and those unique school characteristics which affect him, was collected from state records, school administrators, teachers and the students themselves.

Implementing the model was carried out in three stages or phases.

Phase I included the development, field testing and refining of:

1. Measuring instruments for each of the ten goals. Examples of these instruments:

   Goal II - Understanding Others - consists of 33 statements which describe situations where differing others interact with the individual. Differences are in items of racial, religious and social backgrounds or physical and mental attributes. Responses indicate the degree of comfort the student reflects in each situation.

   Goal V - Citizenship - consists of 54 items which measure the students willingness to exhibit preferred behavior in social situations under a variety of motivating conditions. Social contexts are presented by 18 stories. Each story has three items which indicate positive or negative consequences resulting from the actions taken. Responses are Yes, Maybe or No. Subscales include welfare and dignity of others, respect for law and authority, and personal responsibility and integrity.

2. Procedures for collecting data about students, school and community conditions.

   School information including such elements as enrollment, percentage of attendance, staff-pupil ratio, instructional expenditure per average daily membership and geographical location of the building was collected from the principal.

   Questionnaires were completed by teachers employed in the school which provided data on age, experience, level of

preparation together with their attitudes toward their career, their satisfaction with students, parents, fellow teachers and administrators as well as other information useful in identifying a school climate.

Students responded to questions about home backgrounds, attitude toward school, accessibility of the school library and guidance services and other items found to be helpful in establishing the school climate.

3. Computer analytic techniques for determining the relationships which exist with student performance.

Investigation was conducted with various multiple regression techniques and expanded to use the QSASE program for finding partial and semipartial relationships.

Phase II concerned the collection of information from a state representative stratified, random sample of schools using enrollment size and relative school district wealth as evidenced by the aid ratio. This information was utilized to establish the frame of reference for pupil, school and community conditions and their relationship to student performance. This was carried out for fifth and eleventh grades in 268 school districts, encompassing 400 schools, 1300 teachers and 37,000 students.

Phase III is the actual assessment of schools. It is a continuing activity begun in 1970. To date 302 of Pennsylvania's 505 local school districts have participated in this phase.

Pennsylvania's legislature, emulating Congressional actions, did not provide the necessary funds, estimated to be $1,000,000 annually, to enforce the mandate. Participation in the assessment program, consequently, has been on a voluntary

basis with the local school district making application to be included in a particular year. Participation includes the commitment of the district to name a representative or coordinator as well as to provide teacher monitors and make available 4 hours of student time at the grade to be assessed.

School district applications are received in September, decisions on acceptance made in October, contact is established immediately thereafter with the district representative to confirm approximate student enrollment to participate in the fall and other essential planning information.

Regional workshops are conducted for the district representatives, by the division staff in February. The major emphasis of these meetings is to make clear that the focus of assessment is upon the school program and not the students, not the teachers or the administrators. Once this concept appears to be accepted some rather intensive training is begun on the mechanics of the collection of data. This includes the need to standardize procedures, the importance of obtaining complete information necessary for accurate prediction, methods for selecting samples of teachers to answer questionnaires and the principles of coding information. Representatives are provided with manuals* and sample forms, given exercises in coding, selecting teacher samples, packing and shipping of various components. The confidentiality aspect is reemphasized - teachers are to seal their questionnaires before returning them to their coordinator, teachers are requested not to look over students' shoulders or through partially completed questionnaires, students are to physically remove their name labels as a step in completion of the assessment - and finally, the explanation of the policy to make assessment results available only through the local district superintendent.

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* Burson, William W. "Manual for Interpreting Intermediate School Reports - Grade 9," Pennsylvania Department of Education, Harrisburg, 1973.

Data collection is done the first two weeks of March. Data processing is performed during the next three months and the compilation of individual school reports requires one more month. In October and November of the year following the data collection, approximately six months later, individual school reports are delivered to the local school district administrator by teams composed of department staff members augmented by specially trained staff from regional educational development centers.

Administrators are requested to set aside one-half day of time to review the report with the interpreters, to make certain the coordinator is present and to invite any other members of the district staff, board or interested citizens he desires. Upon arrival, the team customarily follows a pre-established routine of interpreting one school report - the average level of student performance on each of the Ten Goals of Quality Education, the school's standing in the state on each of the Ten Goals, the school's standing relative to schools operating with similar sets of impinging conditions, a comparative analysis on each of the different conditions employed in establishing the predicted or expectancy level, and aggregated student responses to selected groups of items for most of the Ten Goals. Suggestions for comparing findings for additional schools within the district, recommendations for possible follow-up procedures and the offer to supply additional help, upon request, are part of the initial interpreting session.

The availability of information to agencies other than the local school district participating in the assessment is restricted for approximately six months until the local school administration has sufficient time to digest and publicize the results. State education agencies have easy access to aggregated information but are required to secure release from the local school district before individual school information is made available.

Legislative committees and regional organizations are provided aggregated information upon request. Since this is the most useful form for their purposes no major conflicts have arisen. If individual school district information is requested it can be obtained directly from the local superintendent or upon the presentation of a signed release.

The U.S. Office of Education receives information, largely in the form of identified needs for specific types of schools or school districts, geographical locations or regions, community sizes or as aggregations of statewide strengths and weaknesses.

It might be well to mention at this juncture, that the assessment data is made available subject to the usual limitations of staff and money, to any recognized research organization wishin to use it with the agreement to provide Pennsylvania with its findings.

Such studies are presently underway at Johns Hopkins University, in the development of psychosocial maturity scales; The Urban Institute, in the identification of alternative instructional methodologies useful as intervention techniques; Lehigh University, in the validation of indicators of school effectiveness; and the Pennsylvania State University, in the effort to improve predictability equations.

How can the results be used effectively? Other than the obvious comparisons of student performance with the state normative group, and with performance levels from schools operating within similar sets of conditions, the results can be used to:

1. Determine priorities of attack
2. Provide focus for examining individual student test results which already exist

3. Measure effectiveness of curriculum changes

4. Provide objective data to support requests for programs, equipment, etc.

Evidence that the assessment findings are used to bring about educational change is reported by J. Robert Coldiron* in his study of their utilization by 101 participating local school districts. He found that 91% of district administrators reviewed their current educational programs in the light of assessment findings. Fifty-two of the 101 districts reported some program revisions, another 52 reported that their results enabled them to identify specific problem areas in student performance, staffing policies or organizational strucutre. Finally, 17% of the districts reported the incorporation of totally new educational programs as an outgrowth of the assessment findings.

Statewide needs, identified from the assessment findings, were found to be:

Grade 5 - Interest in school and learning

Vocational Understanding

Grade 11 - Interest in school and learning

Reexamination of the data for different types of school communities provided evidence that the following needs existed in addition to those previously identified to be statewide.

	Grade 5	Grade 11
Urban	Verbal Skills	Verbal Skills
Suburban		Citizenship
Rural	Verbal Skills Self Understanding	Verbal Skills Self Understanding

* Coldiron, J. Robert. "An Investigation of the Utilization of Requested Assessment Information in Pennsylvania School Districts," Unpublished Doctor's Thesis, The Pennsylvania State University, University Park, 1973

A further analysis of the data on relationship to appalachian and non-appalachian areas of the Commonwealth identified verbal skills and appreciating human accomplishment to be needs at the fifth grade level and the understanding of others who are different in race, religion or socioeconomic status for eleventh grade students attending schools located in appalachian areas.

Pennsylvania's State Board of Education passed a resolution in November 1973 requiring all schools to undergo assessment at grades 5, 8 and 11 within the next three years. This, in effect, requires the assessment of one-third of the local school districts each year until 1976. The Department of Education will obtain a reliable estimate of student performance statewide in 1974 and 1975 as well as complete assessment results in 1976. Upon completion of the first cycle a second cycle will be carried out in the period 1977-1979 to provide both cross-sectional and psuedolongitudinal data to aid in determining what changes in the levels of student performance have occurred.